

# **Impact on Near-field Horn Gain from the Phase Curvature Variation in the Horn Aperture Field**

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## **Abstract**

The difference in the theoretical near-field gain correction when using slant or axial length as the radius of curvature of the phase front over the pyramidal horn aperture plane is presented. The difference is an indication of the contribution to the measurement uncertainty, and is discussed for different operating frequencies, different horn sizes and different horn-to-horn separation distances. As an example, the analysis is applied to 10 GHz standard horn gain measurement data.